

tical incisions of the flaps to be first made, as the relaxation of the tension of the parts affects much the state of the flap where the transverse cut is first made, and interferes with the plan of the operation. This is a matter of pure experience which had not entered into my first estimate of difficulties.

ART. IV.—*Notes of Cases treated at the Poor House of Westchester County, State of New York.* By JAMES D. TRASK, one of the Physicians to that Institution.

THOUGH the medical records of a county poor house must almost necessarily be imperfect, I find among my notes not a few cases of considerable interest. But, before submitting an account of some of these, it will be necessary to allude to certain local circumstances, having a most important influence on the results of medical treatment in the poor house of this county.

This establishment is situated in the town of Mount Pleasant, about thirty miles north from the city of New York, and about two miles east from the Hudson River. Its location is unfortunate for such an institution, as it lies in a basin formed by hills on all sides, within ten or twelve rods of a small stream, called the Sawmill River. Immediately in front of the buildings stands a small grove of trees; and in the rear, a range of barns and other out-buildings, by which the free circulation of air in and around the buildings, is seriously impeded. In fact, the spot seems to have been selected chiefly with an eye to the convenience afforded to domestic purposes, by its proximity to the river.

The number of inmates varies from one hundred and fifty in the summer, to over three hundred in the winter. Only a small proportion are Americans by birth, much the largest portion being emigrants from Ireland, constituting a transient population. The permanent inmates are the aged, decrepit poor of the county, those reduced to abject poverty by vice and misfortune, with their children, and insane paupers who are placed in an asylum erected for their accommodation in a wing of the building.

Several of the apartments occupied by the inmates are abundantly roomy, and have sufficiently high ceilings. Those in the attic are very deficient in these respects. They were all constructed without the least regard to ventilation, and consequently, since the introduction of stoves, the condition of the atmosphere within them has been just such as would be expected in rooms crowded by persons of uncleanly habits, with closed doors and windows even during the hot nights of summer.

In the winter and spring of 1849, the admissions into the hospital were

unusually numerous. This arose from the proximity of the poor house to New York city, from which emigrants not unfrequently come immediately upon landing, and are within a few days seized with ship fever. This fever also prevailed among those employed along the line of the Hudson River Railroad, to such a degree that on some sections labour was suspended for want of men.

The baneful consequences of defective ventilation, or rather of the almost entire absence of it, with neglect of cleanliness, soon became alarmingly apparent in the hospital, where, under the absence of anything like proper nursing, medical treatment was almost entirely unavailing, and the patient struggled with his disease under circumstances most adverse.

During the winter and early spring, the sickness was confined almost entirely to cases received from without the house. Later in the season, when the epidemic along the railroad had almost subsided, it broke out in the poor house and attacked many of its inmates.

In June, the cholera suddenly broke out, the establishment continuing in its previous condition, in consequence of the impossibility of procuring labourers to perform the necessary work of keeping it in proper order.

During the past winter, an attempt was made at ventilating a part of the building, which, imperfect though it be, has materially increased the success of medical treatment, and the personal comfort of all concerned.

Fibrous Tumour of the Uterus with Polypi.—Mrs. G. æt. 52, was confined seven years ago, and has since aborted once. At regular monthly intervals she has been subject to attacks of hemorrhage from the vagina. They always are preceded for a day or two by severe pain above the pubis, more especially in the situation of the left ovary, and she says "she can then feel a lump above the pubis; but the tenderness is too exquisite for her to permit of any examination. On the appearance of the discharge the pain passes off. The discharge is always profuse, and I have several times seen at the least a quart of blood which she had passed." The pulse was at such times small and weak; the hemorrhage controlled by cold lotions and acet. plumb. with opium, and rest on her back. She died of cholera in July, 1849.

Autopsy.—A sac of the size of an orange, with very thin walls was attached to the mesentery, and filled with a fluid of the colour and consistence of cream. The uterus was low in the pelvis. In its substance were several firm fibrous tumours from a half inch to two inches in diameter, some appearing on the outer surface, others protruding into the cavity of the organ. In the cervix was found a polypus not over a half inch in length and two lines in diameter. Another, a little larger, was situated about the opening of the Fallopian tube. The polypi were undoubtedly the source of the hemorrhage.

Encephaloid Tumour in the Substance of the Brain, and Malignant Disease of the Testis.—William Hutchins, æt. 27, was admitted under the care of Dr. Scribner, Sept. 26, 1848, for a disease of the left testis, which I had not the opportunity of seeing. He left on the 30th, and re-entered Nov. 22d, having in the meantime suffered the removal of the testis. The nature of its disease I had at the time no means of learning. The notes on his

admission, are as follows: "Patient is stout and muscular, of large frame, bilious temperament, and in good flesh. On approaching his bedside, the expression of his countenance is strange. He stares you in the face, winks his left eye as often as every half minute; and when asked what ails him, answers with an air of indifference, 'Nothing.' When addressed, he speaks slowly and hesitatingly. Says he was well until he was operated upon; that about a week afterwards, his lower extremities became somewhat insensible to the touch. This insensibility, he says, increases, though he is conscious when pinched. The left arm seems to be insensible to about the same degree. He gets up occasionally and staggers about the room, taking hold of the chairs, and in doing so frequently falls forward to the floor. When sitting by the bedside, he sometimes falls suddenly forward headlong. When requested to sit up in bed, he does so very deliberately. Both hands tremble when he reaches them out to take his cup. On being told to show his tongue, it is thrust out close to the right side of the mouth, and the left angle of the mouth is raised so as to show the gums. He is partially blind; able to distinguish the window, but says he cannot see one standing beside him, though he is said to walk about by the chairs; and he grasps his drinking cup when within reach. There is little, if any difference in the size of the pupils; there is no congestion of the conjunctiva. The spasmodic action of the orbicularis palpebrarum of the left eye is very strong, and independent of any movement of the right eye. His memory is defective, and he does not remember in what place he was operated upon, and the account which he gives of himself evidently cannot be relied on. He is somewhat hoarse, and spits out frequently a tough, viscid saliva. His mouth is dry, his thirst great, and he swallows large quantities of cold water. The tongue is generally covered with a thick fur, but is bare in spots. The pulse is of natural frequency, full and pretty strong. The bowels move daily, and to-day he has control of them. Two days ago he passed his urine and feces in bed. How long he has done this, he does not know. He further states that for several weeks he has had pain along the cervical and dorsal vertebræ, and also *across the chin* and over the eyes. At times he moans a good deal. Ordered a calomel cathartic."

Nov. 27th. General appearances the same. Pupil of the left eye is a shade smaller than the right, both contract equally when exposed to the light. The tongue is in the median line when protruded, and there is no paralysis about the mouth. The spasmodic action of the left orbicularis palpebræ continues. Since the last visit has passed urine voluntarily, and had the control of the sphincter ani. He has two or three times, on attempting to walk, suddenly fallen to the floor, presenting no spasm, frothing at the mouth or diminution of intelligence. He sometimes totters across the room after water. His appetite is good, and he eats abundantly. He drinks less than when admitted. Tongue the same as before. Repeat the calomel cathartic.

30th. 4 P. M. Has been purged twice. His condition has continued the same as hitherto, until this noon, at which time, soon after receiving his dinner, he was observed sitting in bed supported by a chair, with his head drooping. Since then he has lain with his eyes open, staring, and when spoken to, turns round but does not speak. He protrudes the tongue when directed. There is no heat of the head or turgescence of the vessels of the eye. The spasm of orbicularis is no longer to be observed. The feet are cold. Lies on the right side, with his feet drawn up, and so far as can be ascertained, there are but *six or seven respirations in a minute*, and nothing then but a prolonged, blowing expiration perceptible. The pulse, counted two hours ago, was but 50 in the minute; it is now 80.

The head was shaved, and the camphor moxa, as a convenient counter-irritant, applied to the occiput and the nucha. He manifested but little sensibility during the operation of this severe agent; sinapisms were applied to the extremities.

Dec. 1st, 10 A.M. Appearance changed; is sitting up supported in bed eating his dinner. He became sensible about 10 o'clock last evening. Talks now as well as before yesterday; protrudes his tongue in the mesial line; partial loss of sensation and of motion in the right lower extremity, and diminished sensation of the right arm. Increased heat of head; pulse 80, more full and firm, but compressible; breathing much more natural, still some blowing character to the expiration; pupil of the left eye decidedly dilated. Does not remember anything of the moxa, which has produced but little vesication or even redness; ordered a blister to the nucha and counter-irritation to the extremities.

2d. Found him sitting up in bed, looking cheerful, and he spoke more naturally than at any previous visit. The extremities were warm, head above natural temperature, and he complained of some pain in the forehead. There appeared to be loss of sensation in the right leg quite up to the pubis; sensation of the rest of the body apparently perfectly good. The spasmodic twitching of the orbicularis of eye not returned, but a slight degree of *ptosis* perceptible. Tongue protruded straight; more clean; none of the viscid saliva observed previously; thirst gone. Involuntary passage of urine; pupils more dilated than before and differing but little in appearance. Pulse 96 and full; on the afternoon of the 1st it was 50, respiration 20 and regular.

4th. Expression of countenance less bright; involuntary discharge of urine and feces. Sensation has returned to the right leg, and is apparently perfect over the whole body. There is some twitching of the orbicularis of the eye; pupils less dilated. Can probably see better than he pretends, and is considered by those about him as "vicious." Pulse 80; renewed secretion of viscid saliva.

7th. About the same; there seems to be diminished sensibility of the right leg, thigh and arm, especially below the knee. He almost altogether refuses food.

8th. When seen in the afternoon there was no change. Soon afterwards, he was observed to turn in bed, to draw up his right leg, which he had been observed to move but little for some days, and to moan. His breathing became laboured, and in fifteen minutes he was dead. He had all along exhibited a provoking perversity of disposition, which induced those in the room with him to suppose he was feigning sickness.

Autopsy.—Seventy hours after death, the brain having been removed by Dr. Scribner and immersed in alcohol, was examined.

Vessels of the *dura mater* full but not distended. Along the course of the longitudinal sinus there was opacity and thickening of the arachnoid in the interlobular spaces; over the posterior lobe of the left hemisphere, the membranes adhered, so as to be inseparable from the brain, without subjecting it to laceration. They were found adherent to the upper surface of a firm tumour which occupied nearly the whole of the posterior lobe, and a considerable portion of the middle one. It was surrounded at the sides and below by a greater or less thickness of cerebral matter, which was reduced in places to a mere film beneath the meninges; only a very thin lamina of cerebral matter separated the tumour from the lateral ventricle. A distinct sac could be perceived investing the tumour on all sides, excepting anteriorly, where the surrounding brain was so softened as to fall down in a diffuent, puruloid mass.

The surface of the sac was smooth and glistening, of a light fawn colour. The optic thalamus of the *right* side was decidedly darker than that of the left side. The right ventricle contained a drachm of serum, the left was unavoidably lacerated and its contents escaped. There was a free escape of serum from the base of the brain, on its removal from the skull. The cerebellum and medulla oblongata seemed natural. The tumour weighed $\text{3iv } \text{3vii}$, was four inches long by two and a half broad, and quite firm to the touch. It was undoubtedly encephaloid in its character.

The following particulars I have recently learned by a letter from Dr. Hosea Fountain, of West Somers, in this county, who removed the testis. Dr. Fountain says, "About a year before this was removed, Hutchins came to consult me; his testicle was then enlarged but little. He had been told it was hydrocele, and he wished me to tap it. His health appeared then good. There was, however, a slowness of motion and of speech I had never observed in him so much before. I do not remember that he showed any symptoms of head disease at this time. I advised the removal of the testicle at once. He was unwilling to submit to it, but went to a quack and worked for him in the field through the season with the hope that he would cure him. When next he came to me, six or eight months or more afterward, his appearance had changed much. The testicle was enlarged and painful. There was a difficulty about making water; I do not remember of what nature this was. His eyes had a vacant, glassy look; vision was imperfect, at times worse than at others, and one eye was worse than the other. In walking, his gait was unsteady, hesitating and wavering; the pulse slow, speech and motion very slow. I refused doing any thing for him, telling him he must die. Some months after this, the unfavourable symptoms had increased. He talked like one in a reverie or partly asleep; at times he was almost blind.

"I suspected disease of the brain, but from the symptoms supposed it was *softening* from deficient action." Subsequent to this, Dr. F. was induced to remove the testis, for another physician into whose hands his patient had fallen. "After the operation, upon pressing the spermatic cord near the divided surface, a white cheesy looking matter oozed from the whole of the divided surface. On dividing the testicle, the surface presented was white and moderately firm toward the surface, becoming softer internally; the central portion was semi-fluid, not purulent; the whole appeared to me as medullary matter. In his best and healthiest times, Hutchins was slow and awkward in his movements, but a strong and able worker, and apparently a healthy man." The wound made by the operation healed readily.

Malignant Disease of the Testis and Lungs.—Baptiste —, æt. 30, a native of Germany, was admitted August 10, 1849, with a large scrotal tumour. The account which he gave through two interpreters, at different times, was this. He had not been aware of any swelling in that region until two weeks prior to his admission. At that time, while engaged in handling heavy stones on the Hudson River Railroad, the right testicle was accidentally struck by an iron crow-bar. He soon noticed its increase in size, and in *two weeks* from the receipt of the injury, at the time of his admission, the tumour had attained about the size which it now presents after removal from the body, being about as large as the head of a child six months old. Its surface was irregular and lobulated, with numerous large veins passing in deep channels transversely across it. At one point there was distinct fluctuation. The lower part when compressed between the two hands afforded a gurgling not unlike that produced by the yielding of the intestine during the reduction of a hernia. This

was observed by another physician; this, with the fact of its following violent exertion, and attaining so great a size in so short a time, induced, on an imperfect examination, a suspicion of its being a hernia. No connection, however, could be traced between the tumour and the abdomen; and this circumstance, together with the malignant aspect of the countenance, made it clear that it was a malignant disease of the testis. The cord appeared free from disease, and it was resolved to give him the chances afforded by a removal of the diseased organ. There was a good deal of activity in the tumour, and he complained very much of heat and pain in the organ. The surface was at two particular points, of a bright red and hot to the touch. On visiting him two days afterwards, he was observed to cough, and his expectoration was very copious and rusty. The right lung sounded dull on percussion, laterally; there was diminished clearness of respiration, some mucus but no crepitant rale. Pulse was about 100, full and rather hard, the skin hot, and there was considerable thirst. He was treated with antimony in small doses, and afterwards was blistered. The rusty sputa disappeared, and was succeeded by the white frothy sputa of bronchitis; the dulness however remained, and respiration became less audible. From the time of the appearance of symptoms of congestion of the lungs, he rapidly lost flesh and his appetite. In a few days, the dulness, which had hitherto reached only to about the third rib, was found to extend quite up to the clavicle, and so very marked as to be observed by all the bystanders. Three or four times he lost a good deal of blood from a wound of one of the varicose veins of the surface which he had injured by scratching. His sufferings were very great, and he daily implored me for the removal of the disease, but an operation was of course out of the question. Belladonna ointment afforded some relief; opium he refused to take. During the time he was in the hospital, the tumour increased but little, not over two inches in its longest circumference. About two weeks before his death, he expectorated a pint of bloody froth, and a piece of what seemed to be disorganized lung, an inch long and half an inch in diameter. For some days before his death, the fecal discharges consisted of a small quantity of bright-coloured yellow fecal matter, and a larger quantity of a white pulaceous substance not unlike *blanc mange*.

He died, October 5th, just eight weeks from his admission, and, if the history derived from him is correct, only ten weeks from the appearance of the disease in the testis.

Autopsy eight hours after death.—Great emaciation. The tumour had lost its feeling of firmness and was flaccid, from subsidence of active congestion, giving the idea of its being chiefly fluid; it had also shrunk so as to measure precisely the same as when he entered the hospital weeks before. The varicose vessels ran down over the anterior part of the thigh and down over the perinaeum; no arteries of any size were observed in the dissection. In the anterior part of the tumour the skin was so closely adherent as to be inseparable—there was no vestige of tunica vaginalis or of the testis, the tumour being covered by the thinned integuments of the scrotum alone. The cord was free from disease external to the abdomen; within that cavity a diseased gland was found lying in contact with the spermatic vessels. A large number of mesenteric glands were enlarged, and of a white colour; a few consisted of a soft brain-like matter, and equalled a small hen's egg in size. The liver presented no unusual appearance; the gall-bladder was distended with green bile, the spleen small and healthy, as were also the pancreas and kidneys; the stomach and intestines were not opened.

Great difficulty was experienced in removing the right lung, from its

intimate adhesions to the walls of the chest and to the diaphragm, in consequence of which it was much torn. The whole of it, excepting the apex extending to between the second and third ribs was converted into a solid mass of medullary disease, readily broken off in lumps and almost exactly like brain in colour and general appearance without its cohesiveness. The superior portion of the lung yielded an abundance of bloody froth when cut into, and it could not be torn. The left lung presented a few patches, which were emphysematous; in addition, there were several tumours of medullary matter disseminated through the substance of the lung, and embedded just beneath the pleura pulmonalis, an inch or more in diameter. A section of this lung presented the same bloody froth as that found in the apex of the other lung.

The heart was pale and flabby, and there was a hypertrophy of the right ventricle; the two ventricles differed but little from one another in thickness; the tumour weighed after removal, six pounds six ounces; the lung completely filled the left side of the cavity of the thorax. This testicle, and the tumour of the brain in the preceding case, are in the museum of the New York Hospital.

Remarks.—In the first of these two cases we are ignorant of the exciting cause of the disease, neither do we know whether its origin in the brain was simultaneous with its appearance in the testis, or consequent, or antecedent. From Dr Fountain's account, when the testis was so far diseased as to require removal, there was a slowness of gait and speech. Walshe says that an affection of the lymphatics and glands communicating with the diseased organs affords a means of ascertaining the order of succession in the development of the disease. The absence of any such affection of the inguinal glands, in the case of Hutchins, is perhaps negative evidence that the testis was not the organ primarily affected. In the case of Baptiste, there is quite conclusive evidence that the lung was first affected. However skeptical some may be as to the rapidity of the growth of the diseased testis, it is certain that at the time of his admission he was engaged in daily labour upon the railroad; he repeatedly stated that he observed nothing unusual about the testis until two weeks before his admission. At that time his whole appearance however was cachectic; we can hardly suppose that the constitution could have become contaminated in two weeks, and there can be little doubt that the disease of the lung had existed for several months; for cancerous diseases "may exist for a length of time in the most important organs—witness the brain, the liver, the lungs—without producing the least functional derangement."—*Walshe*. In the *New York Journal of Medicine* for 1847 is reported a case of encephaloid disease of the lungs, which the patient dated from "a sudden giving way in his side," which occurred while he was at work in the harvest field about a year and a half before his death; his health had not been good for some time previous to that. I have no statement as to the health of Baptiste previous to the accident to his testis. No cough was observed on his admission; certainly no dyspnoea; and I am under the impression that there were no rational symptoms of any disease of the lungs previous to the attack of congestion

which occurred on the second week after his admission. The disease, from being latent, became suddenly active, and thenceforward proceeded with rapid and fatal strides. It will be observed that the increase of the tumour after his admission was entirely disproportionate to its previous growth. Was there a transfer of active disease from the testis to the lung? Apart from the cachectic appearance, at a time when the injury to the testis was so recent, the pre-existence of the pulmonary disease is made probable by the coexistence of hypertrophy of the walls of the right side of the heart. This lesion, as is well known, frequently depends on obstruction of the pulmonary circulation. There was no marked dilatation, if any, connected with the thickening of the walls of the ventricle.

The rapidity of the growth of the diseased testis was certainly remarkable. Walshe, however, quotes from Andral a case of encephaloid growth of the omentum, extending from the greater curvature of the stomach to the pubes, which daily increased perceptibly, and which proved fatal in five weeks from its first appearance, and adds that he has himself seen instances of equally rapid growth in the extremities. A curious feature of Hutchins's case was the irregularity attending the loss and restoration of sensation and motion of the limbs, whatever may be the explanation of the matter.

Double Femoral Hernia with great dilatability of the Abdominal Muscles.—The patient had a femoral hernia in each groin of the size of a goose egg. During convalescence from an attack of dysentery, he was attacked with peritonitis, which yielded to treatment. Soon afterward, when standing, a fluctuating prominence was observed in the left iliac region, four inches by two and a half inches, in the direction of the muscular fibres. When the fluid had been removed after appropriate treatment, it was found that he could inflate himself, so as to cause several such protrusions where the abdominal muscles were deficient in tone. The fluctuation had been caused by the fluid effused in the attack of peritonitis falling into the pouch. He was supplied with a broad bandage, and discharged.

Gangrene of the Leg from simple fracture.—This took place in a man of about 40 years of age, who was brought in about a week after meeting with the accident. The fracture was caused by the fall of a bank of earth. There was no evidence of extensive or important injury to the soft parts. A line of demarcation had formed just below the knee, at and below which point, for several inches, the limb was of a dead charcoal black. The limb above the knee was emphysematous, and also the lower part of the abdomen. Under the use of brandy and quinine, the effusion of the gases into the subcutaneous cellular tissue was in part absorbed, and the jaundiced hue of the skin disappeared. He declined amputation, and lived eight or nine days after admission.

Compound Dislocation of Ankle-joint and Fracture of the Femur.—The patient was a young Irishman, æt. 20, of good health and habits, who was injured by the fall of a bank of earth. There was the dislocation of the ankle outwards, with fracture of the tibia and fibula quite close to the articular extremity, and the internal malleolus was broken off: about two and a half inches above the

latter was a laceration of the integuments, just admitting the extremity of the little finger. There was a simple fracture of the femur of the same limb at the junction of the middle and the lower third. The limb was placed upon a double inclined plane, and treated with cold applications. Reaction was not excessive; quite firm union of the fractured femur took place in three weeks. His general condition, however, was bad, and it became evident that his only chance for recovery was in amputation, which was performed below the knee by the flap method, on the 24th day after the receipt of the injury; the patient being rendered insensible by the inhalation of ether. He slept well on the night of that day; the next day there was increased heat of the skin, thirst, and pulse 130. On the third day his pulse was 140; he was quite comfortable in his feelings and the little pain which he suffered was referred to the foot. During the night the limb suddenly became swollen to twice its previous size; he vomited bile copiously, his skin became of a yellow hue, and when seen next morning the entire stump for five or six inches up the limb was one dark, fetid, gangrenous mass. He died on the next day. This result I attributed in part at least to the condition of the air in the hospital at the time.

Compound Fracture of the Leg.—This patient received an injury in the same manner as the two cases last related. He was an able-bodied, temperate man, about 40 years of age. The external wound, three inches above the external malleolus, just admitted the forefinger, and there was but little displacement; there was very free hemorrhage. He was made to inhale the vapour from a drachm of chloroform, and then on passing the forefinger into the wound there was discovered extensive laceration of the soft parts and comminution of the bones, the articular end being broken into three pieces. Amputation was advised, but obstinately refused. The limb was placed in a box of wheat bran, after reduction of the fibula, that of the fragments of the tibia being impracticable. On the fifth day, there was every appearance of gangrene. There were delirium, fetid discharges and great debility for about three weeks, when he began to improve. At the end of five weeks, there was union of the bones sufficient to sustain the limb when held up by the heel. Discharge continued, and in a few days he began to sink, and died two months after admission. The bones of the joint were almost completely denuded of periosteum and cartilage. There was a similar condition of the articular surfaces of the bones of the elbow joint of the left arm, which had suffered an apparently trifling contusion at the time of the accident, also an abscess between the muscles and the bones.

Of fractures, those of the clavicle, in accordance I believe with general experience, have been the most frequent. They have been treated sometimes by directing the patient to lie on his back till union takes place—a direction, by the way, which poor-house patients rarely find fault with, the elbow being generally supported by a sling. In compound fractures, the limb has been treated by being placed in a box partially filled with wheat bran, in which the limb lies imbedded; this is a particularly convenient mode of treating accidents attended with supuration.

Anæsthetic Agents.—Chloroform and sulphuric ether have both been frequently employed for anæsthetic purposes, and generally with most gratifying consequences. Ether has been used in preference to chloroform, from an impression that its exhibition was less hazardous. It has been used almost

indiscriminately in cases of dislocations, in reduction of fractures, in the examination of extensive wounds of the soft parts, and previous to making incisions for the evacuation of pus in deep-seated abscesses, in phlegmonous erysipelas, periosteal inflammation of the fingers, &c. The effects of these agents have been most gratifying in the reduction of dislocations, which, after its administration, has been effected with very little exertion.

In only one case of labour was chloroform resorted to. Its administration was followed by an almost entire cessation of the pains, which continued so long as the patient was at all deeply influenced by it. By keeping her but moderately affected, the action of the uterus was not interfered with, and she was delivered in a condition of partial insensibility. In private practice I have administered both chloroform and ether in cases of labour, with none but the most happy effects; and in none but the above instance have I seen the strength of the pains affected by either of these agents.

Cholera.—During the summer of 1849, the cholera made its appearance, close upon the heels of ship fever, when the house was just beginning to recover its ordinary condition of health. Up to this time, there had been no case of cholera, so far as I can learn, between this place and New York, nor was there any evidence of its introduction from that city. Repeated warnings had been given the inmates that they should apply for medical aid the moment that any one should perceive in himself any disposition to diarrhœa, but as yet few if any had presented themselves, when two men sleeping in beds almost adjoining were suddenly taken with cramps, vomiting and diarrhœa, after midnight, and before noon were both dead. On the same day, a female at the opposite end of the establishment was similarly seized, and died within twenty-four hours. From this there were some three or four new attacks daily among the inmates of the house. The paupers at this season of the year were the infirm and aged, children and lunatics. Upon the latter the pestilence fell with the greatest severity, about one-half the victims being from these unfortunates. It was impossible, in general, to learn anything of their condition until the disease was fully developed.

Immediately on the appearance of the disease, it was discovered that a large number had for many days been suffering from diarrhœa, which they had kept concealed from the keeper and medical attendant. During the continuance of the cholera, cases of diarrhœa were constantly occurring, and every patient seized with cramps, vomiting and serous discharges from the bowels, so far as could be ascertained, had laboured under diarrhœa for several days previous. Not a few suffered themselves to run down under continued diarrhœa, without applying for aid, until too late, notwithstanding the daily warnings from the death of those around them. One nurse had three distinct attacks of cramps, vomiting and serous diarrhœa within five or six days, each traceable to reckless imprudence, and completed his week's work by catching a mess of fish on the Sabbath, and cooking them by stealth; and within a

half hour after eating the same he was dead. This is not a solitary illustration of the abject moral condition to which the inmate of the almshouse has too often, I may say, generally fallen.

In the treatment of cholera, we had unquestionable evidence of the utility of calomel and opium. The usual mode of administration was that of from three to five grains of calomel and one of opium every two hours, until the action of the liver became re-established. The reappearance of bile in the evacuations was anxiously looked for, and when observed it was regarded as indicating a favourable turn in the course of the disease. In one instance, the attack being very sudden and severe, one grain was given every ten minutes, with three or four drops of laudanum, and the patient recovered.

In one case of collapse, scalding water was applied to the abdomen, and calomel given in one-half drachm. doses every half hour, for two hours; but the result in this instance did not encourage a repetition of such heroic practice, even in desperate cases. There were but two examples of secondary fever following reaction from collapse, and both proved fatal.

In the latter part of the epidemic, my attention was directed more to the necessity of controlling the diarrhoea, as such. The constant prevalence of diarrhoea, during the entire epidemic, presented what seemed to be a series of examples of cholera from its simplest up to its most grave and fatal forms; and pressed upon the mind most forcibly the conviction that all these cases were the result of the same morbid cause; and we were compelled to admit the conclusion, now so generally entertained, that the diarrhoea is not a premonitory, or *admonitory* symptom, but the first stage of the disease itself; not that every case of diarrhoea would, if left alone, have terminated in collapse; but that any of them *might* thus terminate.

In the treatment of diarrhoea, a mixture of aqua ammonia, spirits of camphor, tincture of opium and tannin was kept prepared, and directed to be freely given to those who applied for relief. This, with a recumbent position, was generally successful.

During the state of collapse, frictions with capsicum were found more effectual in inducing reaction than any other agent. The vapour and hot air bath were faithfully tried, but little benefit resulted from their employment. Conjoined with frictions, was the moderate use of the solution of chloroform in camphor and spirits of nitre.

The theory of the dependence of cholera upon the existence of an agent in the atmosphere called ozone, and the fact of its being neutralized by contact with sulphurous acid gas, early attracted our attention. It was evident that the combustion of but a small quantity of sulphur would be sufficient to neutralize all the ozone the atmosphere of the buildings might contain. A quantity of flowers of sulphur were stirred into a strong solution of nitre, until the whole was of the consistence of cream. Several yards of common lamp-wick were then dipped into the mixture, and after being withdrawn, were dried in the sun, thus forming a slow match, encrusted with sulphur. A

coil was put in each room, on a plate of metal, and set on fire at one end. A little attention was required every hour or two, to renew the coil when burnt out, and the apartments were by this means constantly filled with an odour of sulphurous acid, just barely perceptible. Should it ever be deemed desirable to push the experiment on this alleged influence of sulphur fumes, in destroying the morbid poison, this is confidently recommended as a convenient mode of securing a continuous and moderate supply of the sulphurous acid gas. Our limited experience does not warrant the expression of any opinion upon the utility of the measure. Unfortunately, in consequence of the great press of duties at the time, I neglected to test the presence of ozone and the effect of the sulphurous acid gas, if any, upon it, by iodide of potassium. There were, during the epidemic, forty-seven cases and twenty-seven deaths.

Dysentery.—Very soon after the disappearance of cholera, *dysentery*, which was then prevalent in the surrounding country, made its appearance in the house. Both here and in the neighborhood the character and progress of the disease seemed to be modified by the cholera atmosphere. There was in many instances a degree of prostration attending the disease which could not have been anticipated, and which must have been due to atmospheric causes.

In the treatment, reliance was placed on opiate enemata, nitric acid and laudanum, mucilage, fomentations, or blisters to the abdomen very early if fomentations failed to relieve the pain and tenderness. When there was marked deficiency of biliary secretions, calomel was employed, usually in small quantities, as one-sixth of a grain of calomel with an equal quantity of opium and a half grain of ipecac. every two hours. The gums were frequently tender in twenty-four or thirty-six hours, and then convalescence was confidently expected. In a severe case of diarrhoea attended with great prostration, after the failure of many other remedies a half drachm of sulphate of zinc was given in an enema with a pint of water and two drachms of laudanum. The patient rallied at once and recovered. Nitrate of silver was frequently given in enemata, of the strength of fifteen grains to half a drachm, to the ounce of water, followed immediately by an enema containing a drachm or two of laudanum to relieve the tenesmus caused by the caustic.

I may remark that this treatment was adopted first in private practice, in the case of an old gentleman who was labouring under a severe chronic diarrhoea, the sequel of a grave attack of dysentery. At the end of the fifth week, when a large number of remedies had been resorted to in vain, among which were enemata of strong solutions of sulphate of zinc, of acetate of lead, of opium, and of tannin, and the administration of the same by the mouth, a solution of half a drachm of the crystallized nitrate dissolved in an ounce of rain water was thrown up the rectum by a glass syringe. It was not retained a minute, and caused a good deal of tenesmus for some time after the injection.

of starch and laudanum, which was given immediately. Previous to this, his discharges had generally occurred as often as once in two hours. He now had none for fourteen hours, and in the remaining ten hours had five, but they were less in quantity than before. All medicine by the mouth was suspended except a few drops of sweet spirits of nitre. During the next twenty-four hours he had five dejections, small and quite consistent. That day he had another enema containing only fifteen grains of the caustic followed by the opiate, and during the next twenty-four hours he had but three dejections. From this time he gained strength, and in eight days from the first employment of the nitrate of silver he was walking about the house; more or less irritability of the bowels continued through the winter following, owing to his uncontrollable determination to eat and act just as he pleased.

Ship Fever.—It has been already remarked that a large number of our cases of fever occurred in persons employed on the railroad. Many of these had been in this country several months, and several two years or more. The symptoms presented by them were, nevertheless, identical with those in persons recently landed. The conditions under which such persons live are abundantly favourable for the development and propagation of the poison of typhus; the shanties which they occupy being crowded to excess. I have notes of nearly one hundred cases, but from the imperfection of the details in several, I shall only give a few general results.

During the prevalence of ship fever, we had several cases of common bilious remittent, but never a perfectly well-marked case of typhoid fever as seen in the New England States.

The earlier symptoms were almost uniformly stated to be, chills followed by flushes of heat, and pain in the head, back and limbs; sometimes in the head and none in the back and limbs, and in other cases severe pains in the back and extremities without headache. Accompanying these there was almost uniformly a sense of great debility; in two cases there was great depression of spirits; sleep was very generally disturbed by bad dreams; nausea was occasionally complained of, but not generally; the bowels were generally torpid on admission.

When the disease became fully developed, complications were of frequent occurrence, and were universally met with in fatal cases. In the winter and early spring, bronchitis complicated almost every case; later in the season, the abdominal and cerebral organs were those most generally involved. Bronchitis, though in many instances severe, was fatal in only one case; two died from pneumonia.

In a few cases, the force of the disease fell upon the brain from the first. These patients were early seized with general tremulousness of the whole system with insomina, and more or less delirium; at first only at night, but at a very early stage of the disease, constant. In one case violent convulsions took place repeatedly during two or three days preceding death. Lesions of

the brain afforded the prominent symptoms in at least three-fourths of the fatal cases.

The tongue was almost uniformly covered in the middle with thin white fur, the tip and edges being of a brighter red than natural. Later, the white fur became yellow and thick, and in bad cases brown. In several cases there was inflammation of the fauces. There were two cases of parotitis of one side, which resulted in suppuration, both fatal. Some tenderness of the abdomen existed in a large proportion of cases; diarrhoea was by no means of general occurrence.

The pulse averaged from 115 to 120; in grave cases they reached 140 and remained so for several days. In only two cases was the pulse observed to be below the healthy standard, in these it was only 50 during several days.

Petechiæ were not always found; they were absent in at least one-third of the cases. When they occurred they were usually abundant, scattered over the extremities as well as the trunk, of a dingy red, and resembling somewhat in general aspect the eruption of measles. They did not entirely disappear on pressure. Their general duration I am unable to state; in one case in which they were of a bright rose colour, and not unlike those in typhoid fever, they disappeared on pressure and lasted six days.

Convalescence was quite generally preceded by a critical sweat, in a few instances by diarrhoea or epistaxis; but so far as could be observed, they did not occur on any particular days. It was, however, frequently difficult to determine from the patient's account the date of the commencement of the attack. For this reason the entire duration of the fever could not be correctly ascertained, but from a rough estimate, it was not far from sixteen days.

The mortality was about one in five.

Relapses were of very frequent occurrence and seemed to arise without any assignable exposure or imprudence. There was at least one case of the occurrence of the fever in the same person three times in succession, the patient having had an interval of health of a few days in which he was able to work.

There could be no doubt of the infectious character of the disease. During the winter 1847 and '8 the two attending physicians fell victims to the disease; soon after another experienced it. A medical student was also seized, and almost every nurse suffered severely from it; and as has been already stated it eventually prevailed among the inmates of the establishment.

The treatment was for the most part very simple. In most cases a dose of castor oil was required on admission. The surface was directed to be washed with soap and water and the patient put upon *spt. mindereri*, a tablespoonful three times a-day. Nausea was overcome by sinapisms to the stomach and the application of ice; tenderness of the abdomen generally yielded to a blister, when hot fomentations failed. If there existed any particular disturbance of the nervous system, two to five grains of camphor and half a grain or a grain of ipecac. were given every three or four hours. The solution of camphor in chlo-

roform was given with good effect in the same class of cases. Cold applications to the head were often required, and blisters to the nucha or to the shaved scalp, often acted most admirably in subduing cerebral irritation. Dover's powder and camphor, ten grains of the former and five of the latter, were uniformly given when the patient did not sleep well at night, unless there were symptoms of coma, or satisfactory coincidence of active inflammation of the brain.

Stimulants were in most cases required at an early date, and their effect in allaying irritability of the cerebro-spinal system was often very gratifying. One prominent cause of the large mortality was the faithlessness of attendants, who often drank the stimulants intended for the sick.

But few post-mortems were made. In two instances in which violent delirium had existed, meningitis was discovered. In the only instance in which I had the opportunity of making a thorough examination of the whole body, inflammation of the arachnoid of the upper surface of the hemispheres, with opacity and thickening was very strongly marked. The spleen was enlarged and readily broke down under the fingers. The liver was apparently healthy. The intestinal tube was carefully examined, and not the slightest appearance of inflammation or enlargement of the glands, or inflammation of the mucous surface could be observed.

The average age of patients was 27 years.

Intermittent Fever.—This, I have almost uniformly treated, by giving ten grains of quinine in powder, some four or five hours previous to the anticipated recurrence of the paroxysm. One dose has almost uniformly effected a cure. In some instances it has failed to arrest the expected attack, from its occurring at an earlier hour than before, or from the patients delaying too long the taking of the medicine. Nevertheless, in these cases, subsequent attacks have been prevented. I may remark that the quinine in the large doses referred to does not produce physiological effects proportional in intensity to the quantity taken. Not unfrequently have ten grains been given, without producing any of its ordinary physiological effects.

Ferro-prussiate of iron has often been employed, and with advantage, though it cannot be compared with quinine as an antiperiodic. Two cases were under treatment for several months, during which they were subjected to the effects of quinine in large and small doses, of Prussian blue and of arsenic; and proper attention was at the same time paid to a regulation of the various functions of the body. In one there was no evidence of any local congestion; in the other there was some enlargement of the liver; neither was cured. The case of the latter was rendered interesting, from certain anomalous symptoms connected with its progress.

In September, he entered, with tertian intermittent, which readily yielded to quinine. He went out and worked, and at the end of a month again entered, and was under treatment a month, and discharged, and in about four

weeks was re-admitted. He now had sometimes twenty "shaking fits" daily, sometimes of the head alone, at others of various limbs. At night, the bed was often heard shaking.

After awhile he suffered from intense neuralgic pains in the head. At the end of three months, his condition was as follows: In addition to the severe pains in the head and face, "pulse 66; respiration 130 in a minute." Of the frequency of the respirations, there was no room for doubt. I repeatedly counted the respirations during an entire minute, and there were that number of distinct inspirations in that period. At this time, "the pupil was seemingly somewhat contracted; but there were no evidences of cerebral congestion. When his attention is arrested, he starts up as from a doze; *breathes naturally while engaged in conversation*, and talks naturally; but on letting him alone, the rapid respiration returns, and he lies on his back, with his eyes wide open, as if insensible. Bowels have been torpid, but are readily moved by croton oil." He remained in about the same condition for six months. The paroxysms of rapid breathing continued to recur at intervals, lasting for several hours at a time. Between these, it was not uncommon to find him apparently very comfortable, and he would speak of himself as feeling "first rate." The only local lesion that could be detected was an enlargement of the liver; it descended about a finger's breadth below the edge of the ribs. His emaciation was extreme. He died of dysentery, during the epidemic, having inflammation of the fauces. No post-mortem examination could be obtained.

ART. V.—*Statistics of the Boston Lying-in Hospital.* By D. HUMPHREYS STORER, M. D., one of the Physicians of the Massachusetts General Hospital. (Read before the Boston Society for Medical Improvement, July 8th, 1850.)

SEVERAL of the gentlemen present may remember that I read a communication to this Society eight years ago, upon several hundred cases of midwifery which had occurred in my own practice. In that paper, I apologized for its meagerness, upon the ground that the private physician could not present such detailed accounts of his cases as those who were connected with public institutions, where the opportunities for study were more numerous and greater attention was devoted to minutiae. Having been connected with a small lying-in hospital for a period of four years, since those remarks were made, and having consequently possessed the advantages which that institution afforded, I feel in a manner compelled to present to you its statistics, limited though they are, as accurately prepared as I have been able to arrange them, from its foundation to the period of my leaving it.

My predecessors in office were Drs. Channing, Hale, Osgood, and Putnam.